

REMARKS

Applicant respectfully requests reconsideration of the rejection of this application as examined pursuant to the office action of March 16, 2007. In the office action, pending Claims 1-11 and 14-20 were examined. Independent Claims 1, 9 and 15, and dependent Claims 2, 10 and 19 have been amended. Claims 1-11 and 14-20 remain pending.

Claims 1-11 and 14-20 were rejected in the office action under 35 USC § 103(a) as being unpatentable over IEEE Standard 802.1X “Port-Based Network Access Control” (“IEEE Standard”) in view of US Patent No. 7,042,988 issued to Juitt et al. (“Juit”).

The invention as described by the presently pending claims is a method and system to establish effective security at the edge of the network without burdening network entry devices of the infrastructure with all attributes of authentication functionality. The invention provides authentication-information-only relay functionality for all attached functions seeking access to network services at network entry. The relay function first forwards authentication signals only for processing by more centralized functions of the network system. Only after receiving authentication information does the relay entry system forward other signal types. The relay functionality of the present invention as described by the pending claims eliminates the need for full authentication functionality in all network entry devices without compromising complete authentication activities. This arrangement moves the network protection boundary outward without adding complexity. Applicant respectfully suggests that the cited references fail to render the present invention obvious.

Applicant has amended independent Claims 1, 9 and 15 to describe with further clarity the present invention, in which only authentication signals are forwarded by a network entry device for attached function authentication prior to permitting the forwarding of any non-authenticating signals. This amendment to the independent claims is fully supported by the Specification at least at paragraphs [013] and [024]. Applicant has also amended dependent Claims 2, 10 and 19 to clarify that an embodiment of the invention contemplates the forwarding of the authentication messages an authentication function via OSI Layer 2 rather than the higher level transmission protocol contemplated by the IEEE Standard. This amendment is fully supported by the Specification at least at paragraph [025]. Applicant respectfully suggests that the presently pending claims of the application are allowable.

The 35 USC § 103(a) Rejection

Claims 1-11 and 14-20 were rejected in the March 16, 2007, office action as being unpatentable over the IEEE Standard in view of Juitt. It is asserted in the office action regarding Claim 1 that the IEEE Standard describes through page 9, figure 6.2, and page 11, figure 6.5, the steps of: a) configuring the network entry device to recognize authentication signals; b) receiving at the entry device signal packets from an attached function; c) holding or discarding non-authenticating signals of the packets; d) forwarding only authenticating signals to another device for authentication; and e) forwarding non-authenticating signals through the entry device only after authentication. Step a) of the method of Claim 1 in its entirety describes “configuring the network entry device to recognize authentication signals received from an attached function, and not to operate as a PAE authenticator”. Figure 6-5 of the IEEE Standard only shows a network device for forwarding authentication signals that is also a PAE authenticator (see the Authenticator System of that figure). The IEEE Standard therefore does not contemplate a method or system in which the forwarding device is not a PAE authenticator. That is noted in the office action, and Juitt is then cited as disclosing an authentication gateway server used in combination with wireless access points such that the wireless access point corresponds to the non-PAE authenticator network entry device and related method of the present invention.

Applicant respectfully disagrees with the asserted representation of the scope of the Juitt reference. In particular, the office action incorrectly mixes and matches features described in the IEEE Standard with features of a plurality of components of the Juitt reference. The office action seeks to combine features of the Juitt gateway server (allowing initial passage of only authentication signals for authentication) and the separate wireless access point (a forwarding device that is not a PAE authenticator) as representative of a single device having the features of the present invention. However, Juitt cannot be read in that way. Specifically, the wireless network entry devices of Juitt allow both authenticating and non-authenticating signals through to the network prior to authentication. See, for example, column 3, lines 1-11, of Juitt, in which it is stated that “The request might be an explicit request for access, and can include an identifier and authentication information ... The request might be an implicit request, such as a request to access network resources, a web page request, and so on.” Clearly, Juitt contemplates having the network entry devices act simply as forwarding devices for all signals and not as an initial filter

of only authentication signals. Therefore, while the Juitt network entry devices are not PAE authenticators, neither do they serve to bar non-authenticating signals until after authentication.

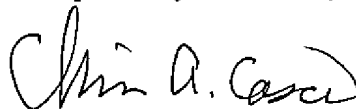
The combination of the Juitt system and corresponding method with the IEEE Standard fails to address the problem solved by the present invention. That is, it remains possible with the Juitt system to overwhelm the network entry devices with a broad transmission of non-authenticating signals, which could swamp the Juitt gateway server in a Denial of Service attack. The authentication functionality of the central gateway server (or even a core authentication server to which the Juitt gateway server may pass authentication signals, see e.g., column 3, lines 51-54) may protect the network from unauthorized access, but it may not prevent overwhelming attacks. Moreover, the IEEE Standard does not contemplate and address such an attack. On the other hand, the present invention does address it by pushing out truly to the edge of the network a level of protection contradicted by the Juitt system. Specifically, the present invention provides initial blocking of non-authenticating signals at the edge until authentication occurs. In this way, a relatively inexpensive and relatively simple network device may reside at the edge (where the number of network devices is ordinarily the greatest) without the processing commitment required of an authenticator. The presently pending claims describe such a system and related method, consistent with the goal of providing network protection without the excess burden of complexity in all network devices involved in the authentication process.

Whereas the rejection of all pending claims of the application is based on the same combination of the IEEE Standard and Juitt references, Applicant respectfully suggests that the amendments made to the claims and the arguments presented herein successfully traverse the 35 USC § 103(a) rejection of the claims. Withdrawal of that rejection is therefore requested.

CONCLUSION

Applicant respectfully suggests that the claim amendments and the arguments presented herein fully address the rejection under 35 USC § 103(a). Allowance of pending Claims 1-11 and 14-20 is therefore requested. Applicant notes that by this amendment, pending dependent Claims 2, 10 and 19 have been amended and no new claims have been added. Therefore, no additional filing fee is required.

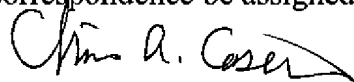
Respectfully submitted,



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I hereby certify that this correspondence is being transmitted to Mail Stop Non-Fee Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, using the EFS-Web Service of the US Patent Office on June 13, 2007. It is hereby requested that this correspondence be assigned a filing date of June 13, 2007.



Chris A. Caseiro